

BOOK REVIEWS

2nd Interface Between Ecology and Land Development in California. Edited by J. E. Keeley, M. Baer-Keeley, and C. J. Fotheringham. 2000. U.S. Geological Survey Open-File Report 00-62. Sacramento.

This book brings together a set of papers delivered at the 2nd Interface Between Ecology and Land Development Conference held in 1997. I had the pleasure to review the proceedings from the first conference, held in 1992 (Keeley 1993), and it is interesting to observe how the issues have both developed and remained the same in the intervening time.

The issues and problems of rampaging land development and how these impact the natural environment are important virtually everywhere in the world. They are particularly acute in California, where urban development, in particular, appears to the outsider to be virtually out of control. These pressures, together with the state's biotic diversity place California as one of the biodiversity "hot-spots" of the world (Myers et al. 2000) and one of the regions most likely to undergo massive biotic change (Sala et al. 2000). California is one of the few recognized hotspots in the northern hemisphere, and is unique in its position in the world economy. In few parts of the world is such exceptional affluence and quality of life set against a rich and varied natural environment and biota. California thus presents an interesting litmus test for whether we can successfully develop methods and approaches to integrating development and conservation. If California, with its affluence and relatively educated population, cannot tackle the problems effectively, what hope is there for the rest of the world, where public and private funds are scarcer and conservation ranks much lower on the list of important issues?

So this collection of papers is exceptionally interesting from an outsider's perspective. The issues discussed here, while focusing on the Californian situation, are relevant in most parts of the world. The book starts with a paper from Mike Soule, which is the transcript from his keynote address at the conference, and as such is very conversational and discursive. Soule's topic is the Wildlands Project and the need to be bold when tackling the creeping development crisis. While I'm sympathetic to his argument, I'm not sure that it does much to help the main issue of the conference. In the face of rampaging land development, it's not enough any more to say "Stop it" and seek to put as much land as possible into conservation networks. Over much of coastal California, it's too late for a Wildlands Project approach, but there is nevertheless

much of conservation value that needs to be protected and managed, and much that can be done to direct and control development so that it is more ecologically acceptable.

The rest of the book tackles some key areas around this problem. The first section looks at the thorny issue of fire management along the wildland/urban interface, and the papers reflect a range of opinions and approaches. A key message in many of the papers is that prescribed fire is likely to be a key management tool, but that there are many questions and issues still to be resolved. The next section deals with habitat fragmentation and its impacts on biota, and the next with NCCP and Land Planning.

A final, long section discusses various aspects of restoration ecology, or how to repair damaged ecosystems and return species to areas of their former range. Some may view this increasing emphasis on restoration as defeatist, maintaining that the main game should still be the preservation of undamaged, pristine habitat. The unfortunate fact is that the amount of undamaged habitat remaining is declining all the time and the maintenance of some ecosystems and species demands that we take remedial action and repair some of the past damage. This series of papers represents a fine collection of current ideas and approaches in this area. I cannot agree with Peter Bowler's plea that everyone, including individuals and agencies, has to concentrate on getting to know small local areas intimately and restoring a few acres. This is fine in theory and will work in a few cases—however, it belies the immensity of the task ahead. If we are serious about broad-scale management and restoration, we will have to deal with vast areas, and this demands that we have effective, replicable treatments which can be applied over large areas. Of course, small-scale restoration is also essential as an ideal way to involve our increasingly urbanized population in contact with nature—recreating bits of nature in cities probably represents one of the best hopes for turning around our current crazy development path. This needs more emphasis on the value of city wildlife and more ecologists prepared to spend time in the cities instead of seeking out nice wild areas far away!

Overall, this collection of papers presents an interesting cross-section of current issues and approaches which should be of value to anyone with an interest in ecology and conservation in California. The coverage is inevitably variable in depth and comprehensiveness, but there is still a wealth of information here. The index is a bit of a token effort and not really very helpful, and there are a few more typos than you would expect. Perhaps the

most serious omission from the book is a synthetic chapter at the end. This would have increased the value of the book immensely. If we are to make progress in dealing with issues such as the interface between ecology and land development, we as scientists need to make sure that we ourselves interface effectively. Only by communicating clearly and concisely about these issues with the people who are making and regulating development decisions will we have any hope of changing the way things happen. Most developers and regulators will not read the papers in this book, but they are the ones that we most need to engage with. Maybe if there is to be a third conference in this series, that is the issue on which it should concentrate.

—RICHARD J. HOBBS, School of Environmental Science, Murdoch University, Murdoch, WA 6150, Australia
rhobbs@essun1.murdoch.edu.au

LITERATURE CITED

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Synthesis of the North American Flora. Version 1.0. By John T. Kartesz and Christopher A. Meacham. 1999. North Carolina Botanical Garden, University of North Carolina at Chapel Hill. In cooperation with The Nature Conservancy, NRCS, USDA, USFWS, USDI. \$495.00. ISBN 1-889065-05-6.

Minimum requirements, a Pentium 90 MHz class processor, 32 MB RAM, 25 MB free hard drive space, VGA display (minimum resolution, 800 by 600, 1280 by 1024 recommended) with 16 colors, Microsoft Windows 3.1, 95, 98, NT, or 2000 operating system, CD-ROM drive for installation.

This is a most impressive work. An update of, and an expansion on Kartesz 1994, A Synonymized Checklist of the Vascular Flora of the United States, Canada, and Greenland, Second edition, Volume 1, Checklist and 2, Thesaurus, Timber press, Portland. Unlike its predecessor, near-instant answers, comparisons, and analyses can be obtained to a multitude of questions within and beyond the scope of the printed work. It contains a comprehensive database with a high level of accuracy on the taxonomy, nomenclature, phytogeography, and biological attributes of the North American vascular flora

(by Kartesz) combined with highly functional software for accessing the database (by Meacham). Thus, a slick and versatile product. The cover in the jewel case is a six page insert. Included is “Nomenclatural Innovations” with 41 new combination (see International Code of Botanical Nomenclature (Saint Louis Code), 2000; Recommendation 30A.1. Ex. 1). Installation of the product is simple. The “Overview of Basic Functions” in the help menu can be printed for immediate reference or accessed as needed.

As the title indicates, this work covers North America north of Mexico. Treated are all continental states and the District of Columbia for the U.S.A., all provinces of Canada with Newfoundland displayed separate from Labrador and the Northwest Territories by administrative district (Keewatin, Mackenzie, and Franklin), the islands of St. Pierre and Miquelon, and Greenland. Furthermore, Puerto Rico, the U.S. Virgin Islands, and Hawaii are also included.

The primary screen contains three nomenclature windows on the left with lists by family, genus, infrageneric name (specific, subspecific, varietal epithets), respectively. A box above each list allows one to type the first few letters of a name and then click on it, or one can scroll and click on a name (options, with common or contrived names, authors, hybrids, synonyms, and either in checklist or thesaurus format). Or the family window can be circumvented by selecting the “All Genera” option. For the area covered, 28,033 taxa are recognized. Nearly 72,000 scientific names and synonyms and nearly 35,000 distribution maps for taxa at all ranks are included. When a taxon at any level is highlighted, its distribution appears in bright green (yellow for states where rare, pink if considered noxious, etc.) on the map in the Geography window, upper right on screen. When a unique taxon is selected, passing the cursor over a political unit or “region” within its range causes a “flyover window” to appear with indication of bibliographic reference, source of voucher, etc., on which a record is based. By highlighting a political unit under “Query,” the contents of the three nomenclature windows are adjusted so as to include only the taxa documented for it. A breakdown of the included taxa may be found under “Summary” in the Attributes window, lower right on the screen. As an example, Texas with 6022 unique taxa; 199 families, 1390 genera, 5320 species, 395 subspecies, 1254 varieties, 77 hybrids for a total of 8635 taxa at all hierarchical levels.

Also in the geography window, operation buttons allow the **set union** (+) of two or more regions (e.g., union of Texas + New Mexico + Arizona) to give all taxa found therein; **set intersection** (*) for a list of taxa found, say in Colorado **as well as** Wyoming (intersection of Colorado * Wyoming); and **set subtraction** (or “not,”-) is used to calculate the set of taxa unique to one political unit